

## **Montana Grizzly Bear Advisory Council**

### **Support Team Brief on the history of grizzly bear hunting in Montana and review of existing laws, policies, rules, and plans**

#### **V. 5.0: Updated March 30, 2020**

##### Background

Hunting of grizzly bears is highly contentious. Not everyone agrees that grizzly bears should be hunted in Montana. Proponents of hunting feel that if a population is considered to be “recovered”, that means it should have animals available to hunters, that hunting may increase social tolerance for bears by people, that hunting may help bears become warier of humans, and that hunting is a preferred population management tool for regulating the population and potentially addressing conflict bears. Some opponents object to grizzly bear hunting as trophy hunting only, where the animal isn’t hunted for meat. Others are concerned that the populations will be overharvested; they would rather see “excess” animals used for expanding distribution into other areas. Many simply do not support the killing of an iconic, and for some, a spiritual animal. The potential for hunting is a key reason some grizzly bear advocates oppose delisting from the ESA.

Whether grizzly bears should be hunted is largely a values question. Biologically however, FWP’s position is that strictly regulated, limited hunting of grizzly bears in populations fully under its authority is consistent with maintaining those populations. Careful monitoring and well-structured mortality limits can help ensure a population is not significantly impacted by hunting.

##### Legal framework for grizzly hunting.

Grizzly bears in the 48 contiguous states are listed as a threatened species under the Endangered Species Act (“ESA”). Section 4(d) of the ESA authorizes the promulgation of administrative rules specific to the management of individual threatened species. Under the current grizzly bear 4(d) rule, hunting is considered a take and is thus prohibited. While it is within the Council’s authority to recommend that the USFWS amend the 4(d) rule to allow hunting, we assume for purposes of this paper that hunting would only occur if grizzly bears are delisted, and then in a manner that would not lead to relisting.

As per federal rule (1992), hunting of grizzly bears is not permitted while under protection of the ESA. If one or more Montana populations were to be delisted, hunting would be regulated by state law. The Montana Fish and Wildlife Commission is authorized by statute to regulate the hunting of grizzly bears. Sec. 87-5-302(1), Mont. Code. Ann.

First adopted by the Fish and Wildlife Commission in 1972 and amended in 1977 the Administrative Rules of Montana contain a Grizzly Bear Policy (ARM 12.9.1401) that contemplates the role of hunting. The policy states:

*“Now, therefore, in order to promote the preservation of the grizzly bear in its native habitat, the commission establishes the following policy guidelines for the Montana department of fish, wildlife, and parks action when dealing with grizzly bear.*

*(c) Hunting and recreational use. The commission recognizes its responsibility to consider and provide for recreational opportunities as part of a grizzly bear management program. These opportunities shall include sport hunting, recreational experiences, aesthetics of natural ecosystems, and other uses consistent with the overall welfare of the species.*

*(i) The department should consider the variability of values between individuals, groups, organizations, and agencies when management programs for various grizzly bear populations are developed.*

*(ii) Sport hunting is considered the most desirable method of balancing grizzly bear numbers with their available habitat, minimizing depredations against private property within or adjacent to grizzly bear habitat, and minimizing grizzly bear attacks on humans.”*

Consistent with the Grizzly Bear Policy, the potential for hunting of grizzly bears has long been a component of Montana’s grizzly bear management plans. Current management plans for grizzly bears in Western Montana and Southwest Montana recommend that a regulated hunting season be a part of the overall grizzly bear management program and provide reasons for that recommendation.

Finally, the Interagency Grizzly Bear Committee (IGBC), a committee comprised of state and federal agency grizzly bear and habitat managers, adopted the following position statement in 2012 regarding grizzly bear hunting:

*“In recovered and delisted grizzly bear populations, the Interagency Grizzly Bear Committee (IGBC) supports the use of regulated hunting following the principles of the North American Model of Wildlife Conservation (Geist et al. 2001) as one approach to help manage numbers and distribution of bears to promote coexistence and help minimize conflict. Although specifics regarding the hunting of a recovered grizzly bear population will be unique to the ecosystem and legal jurisdictions involved, IGBC supports hunting regulations that reflect the best available science, are adaptable to changing factors, are established in a public process, and are consistent with standards in the ecosystem specific Conservation Strategies.”*

## Hunting Regulations

Any hunting of grizzly bears in Montana would happen under hunting regulation adopted by the Fish and Wildlife Commission through a public process. In 2017, as a requirement of delisting of the Greater Yellowstone DPS, the U.S. Fish and Wildlife Service required the states of Montana, Wyoming and Idaho to adopt hunting regulations they could point to as adequate regulatory mechanisms to ensure hunting would not jeopardize the delisted population. Montana adopted regulations that provided a structure for a future hunting season, and were viewed both by the Department and the Commission as conservative (see below). The basis for any hunting season would be allowable take. For the GYE, Montana, Idaho, and Wyoming entered a MOA whereby all three states agreed to annual maximum mortality limits applied within the Greater Yellowstone Demographic Monitoring Area based on the estimated population size and structure. These mortality limits would include all sources of mortality (including estimated unreported mortality) and would be applied separately to females and males that are independent of their mothers (i.e., >2 years old). If, after all other sources of mortality were accounted for, there were available bears within the mortality limits, those could be divided up between the states and available for hunting. This would ensure that no one state could cause the mortality limit to be exceeded. The guiding principles of Montana's hunting season structure that was adopted by the Fish and Wildlife Commission in May 2017 included:

- Maintain a viable grizzly bear population in the Montana portion of the GYE under state management.
- Increase broad public acceptance of sustainable harvest and hunter opportunity as an effective part of successful, long-term grizzly bear conservation.
- Maintain positive and effective working relationships with stakeholders.

Montana's hunting season structure was designed to ensure mortality limits would not be exceeded. The following are relevant components of that season structure:

- Mortality limits are based on a conservative estimator of population size.
- Mortality estimates consider all sources of mortality from throughout the ecosystem, including estimated unreported mortality.
- The grizzly bear season is based on a harvest quota system with the number of available licenses equal to that quota and issued through a random drawing. The licenses/quota represents Montana's share of allowable mortality within the Demographic Monitoring Area ("DMA").
- The total harvest cannot exceed agreed-upon quotas. In other words, total harvest, whether inside or outside the DMA, would be limited to the licenses/quota available within the DMA.
- A male sub-quota would be applied to each hunting unit and the grizzly bear season would close in each hunting unit when the male unit quota is reached. A female sub-quota would be applied to all hunting units and the grizzly bear season would close in all hunting units when the female quota is reached, even if the male quota is not reached in any or all units.

- Hunters must report harvest within 12 hours.
- Hunting season or district closures would occur upon 24-hour notice when a quota is reached.
- Season dates designed to limit female mortality by targeting periods when more males than females are active (i.e., not denning).
  - Spring – March 15-April 20
  - Fall – November 10-December 15
- Mandatory orientation.
- Taking of a bear in its den prohibited.

When the 3-state MOA was adopted by the Montana Fish and Wildlife Commission, FWP informed the commission that additional information would be provided them after calculations of allowable mortality within the GYE were completed for 2017. When that information was provided, FWP recommended that in the first year of GYE delisting (2017), no hunt be authorized, but rather that Montana's allocated portion of allowable mortality be reserved. That recommendation was adopted by the Commission, and thus no hunt was authorized in Montana for 2017. Wyoming and Idaho did propose hunts in their portion of the GYE for 2017, but neither occurred due to the court injunction, and subsequent ruling against the USFWS delisting proposal.

#### The role of hunting as it may affect bear-human conflicts

As reflected in ARM 12.9.1401 from 1977 (above), a reasonable thought is that hunting of grizzly bears could be useful in reducing bear-human conflicts, and that hunting could modify the behavior of bears so as to reduce their danger to humans. We are not aware of definitive research that could support or refute either assumption for grizzly bears in Montana. However, work on black bears in a number of North American jurisdictions can be instructive for considering the possible effects on nuisance complaints generally. The following quote is taken from a position paper on the subject written by a committee of the International Association for Bear Research and Management (IBA) in March 2017, entitled "Hunting as a tool in management of American black bear populations (IBA 2017):

*"The efficacy of hunting as a means of reducing nuisance complaints is subject to considerable scientific debate and is situation-dependent. Some studies have linked hunting and trapping to reduced human-wildlife conflict, suggesting that they reduce populations from biological carrying capacity, remove some problem individuals from the population before they would ordinarily die, and alter the behavior of wildlife (Conover 2001). In New Jersey, the occurrence of a hunting season was linked to decreases in human-bear conflicts the following year (Raithel et al. 2016), and in one Ontario study area, nuisance complaints increased substantially during the 5 years following the closure of a spring hunting season (Hamr et al. 2015), though neither study considered the likely confounding effects of local food conditions on complaint numbers. Conversely, studies in Wisconsin and across Ontario as a whole found no*

*evidence that increasing harvest reduced subsequent human-bear conflict; instead, conflict levels were tied to underlying population growth in Wisconsin (Treves et al. 2010), and in Ontario, to annual variation in natural foods, with complaints increasing in years of poor food supply (Obbard et al. 2014). The position paper concludes: “Where the primary management objective is to slow population growth or limit population size or distribution, then increasing human-caused mortality is the only option. A regulated and monitored hunt can do this effectively...Conversely, if the primary management goal is to reduce human-bear conflict, the crucial and, arguably, only efficient and long-term way to do so is through education, outreach, and implementation of practices and regulatory policies that remove bear attractants...”*

The FWP support team points out that in the context of Montana grizzly bears, recreational hunting would probably be limited to such a small number of bears that behavioral effects at the population level would be unlikely. As well, the season structure proposed in 2017 (above) was geared strongly toward removing only males; thus, nuisance females would be largely unaffected by a recreational hunt, potentially allowing their young to learn undesirable habits (Morehouse et al. 2016). Finally, although a hunt specifically targeting nuisance bears is theoretically possible, it would be logistically difficult and raise ethical issues regarding fair chase.

### Financial Implications

State statute sets the price for a grizzly bear license at \$150 for residents and \$1,000 for nonresidents (87-2-701, MCA). For species with a limited quota, nonresidents may receive no more than 10% of the available licenses. The revenue from the sale of grizzly bear hunting licenses would be deposited into the department’s general license account. It is not earmarked for grizzly bears.

Additionally, the Commission is authorized by state statute to issue one grizzly bear license each year to an organization that can sell it through a competitive auction (87-2-814, MCA). All proceeds from the auction must be used by the department for the benefit of grizzly bears. Because there is no history of such an auction or lottery for grizzly bears in Montana, it is difficult to predict how much funding one might produce. Montana’s highest-valued big-game auction tag, for a single bighorn sheep ram, has sold for a mean of \$324,500 during the years 2011-2020 (varying from \$290,000 to a highest-ever recorded \$480,000). The organization that has administered the auction has typically retained 10% of these funds to cover administrative costs. Because Montana bighorn sheep rams are considered extremely high value by a select group of hunters, these numbers probably represent an optimistic picture of funding potentially available (i.e., it would probably be somewhat lower), but do provide some context.

### Conclusion

Although hunting is a tool that is available once a population is delisted, whether hunting occurs or not would be decided by the Fish and Wildlife Commission after considerable public input.

Like the GYE, a proposal to conduct hunting in other parts of the state would be considered on a case by case basis and would consider public viewpoints on all sides of the issue.

It is within the purview of the GBAC to recommend changes to plans, policies, and rules.

### **Literature Cited**

- Conover, M. R. 2001 Effect of hunting and trapping on wildlife damage. *Wildlife Society Bulletin* 29: 521–532.
- Geist, V., Mahoney, S.P., & Organ, J.F. (2001). Why hunting has defined the North American model of wildlife conservation. *Transactions of the North American Wildlife and Natural Resources Conference* (Vol. 66, pp. 175-185).
- Hamr, J., J. N. Popp, D. L. Brown, and F. F. Mallory. 2015. Problem behaviour of black bears (*Ursus americanus*) in central Ontario: the effects of hunting and natural food availability. *Animal Biology* 6: 151–161.
- IBA (International Association for Bear Research and Management). 2017. Hunting as a tool in management of American black bear populations. 20 March 2017.  
<https://www.bearbiology.org/iba-publications/iba-letters-statements/>
- Morehouse, A. T., T. A. Graves, N. Mickle, and M. S. Boyce 2016. Nature vs. nurture: evidence for social learning of conflict behavior in grizzly bears. *PlosONE* 11(11): e0165425.
- Obbard, M. E., E. J. Howe, L. L. Wall, B. Allison, R. Black, P. Davis, L. Dix-Gibson, M. Gatt, and M. N. Hall. 2014. Relationships among food availability, harvest, and human-bear conflict at landscape scales in Ontario, Canada. *Ursus* 25:98–110.
- Raithel, J. D., M. J. Reynolds-Hogland, D. N. Koons, P. C. Carr, and L.M. Aubry. 2016. Recreational harvest and incident-response management reduce human–carnivore conflicts in an anthropogenic landscape. *Journal of Applied Ecology*. Doi: 10.1111/1365-2664.12830.
- Treves, A., K. J. Kapp, and D. M. MacFarland. American black bear nuisance complaints and hunter take. 2010. *Ursus* 21:30–42.

## History of grizzly bear hunting in Montana

Montana recognized grizzly bears as a game animal in 1923, initiating the regulation of harvest by requiring a hunting license to harvest a bear and by designating hunting seasons and units. Additional regulations were enacted over time (Table 1). Wildlife managers began estimating the total annual kill of grizzly bears (including hunting) in 1947. Assuming hunting accounted for 60% of annual kill, the approximate numbers of bears harvested statewide by hunters during 1947 and 1966 ranged from 6 to 36 and averaged 22 (Fig. 1; Greer 1972). Until 1967, a general big game license allowed a hunter to harvest either a black bear or a grizzly bear. In 1967, when grizzly bears were recognized under the Endangered Species Preservation Act, Montana introduced a special grizzly bear hunting license. A mandatory check was also established to more closely monitor annual harvest. During 1967 to 1974, hunters harvest was 0-9 bears with an average of 3 in the GYE and 9-28 bears with an average of 19 in the NCDE (Fig. 1). In 1975, when grizzly bears were listed as threatened under the Endangered Species Act, hunting seasons were closed outside of the NCDE. The NCDE hunt was permitted to continue provided that human-caused mortalities from all causes, including hunting, did not exceed a quota set at 25 at that time. In 1983, a sub-quota of 9 human-caused mortalities was established for females. In 1986, this female sub-quota was reduced to 6 and the overall quota of human-caused mortalities was reduced to 21. Concurrently, costs of grizzly bear hunting licenses were increased, and more restrictions on the date of license purchase were enacted. The number of grizzly bear licenses sold, and the number of grizzly bears harvested decreased over time during 1975 to 1990 (Figs. 1, 2). Hunter harvest was generally skewed toward males, with males accounting for 60% of harvested bears during 1975-1990. Success rate of hunters (harvested bears/license) ranged from 0 to 3.4% with an average of 1.6% during 1975-1990. In 1991, a limited-entry spring grizzly bear hunt was implemented on the Rocky Mountain Front, designed to target conflict bears. This special hunt resulted in the harvest of 3 males with a hunter success rate of 5.9%. Responding to a lawsuit, a court injunction closed the fall hunting season in 1991. Subsequently, authority for Montana to establish a grizzly bear hunting season in the NCDE was removed by USFWS in a federal rule.

Table 1. Timeline of changes to grizzly bear hunting in Montana. Items in regular type represent changes enacted by Montana law or Montana Fish and Wildlife Commission regulation or rules. Items in italics represent changes enacted by federal law or rule.

Year	Management event or regulation change
1923	Bears (grizzly and black) declared game animals.
	Any person with a general big game license permitted to harvest one grizzly or black bear within described seasons and areas.

Year	Management event or regulation change
1942	Spring grizzly bear hunting season closed statewide; grizzly bear hunting season modified to coincide with fall big game hunting season.
1947	Harvest of cubs or females with cubs prohibited. Managers began estimating annual harvest number.
1948	Baiting of bears prohibited.
1967	<i>Grizzly bear listed as endangered under the Endangered Species Preservation Act of 1967.</i>  Managers begin maintaining grizzly bear mortality records in one central location.  A requirement for a special grizzly bear license established; license could be obtained before or during the season; cost of the license was \$1 for residents and \$25 for non-residents; additional requirement established for hunters to purchase a \$25 trophy license within 10 days of harvesting a grizzly bear.  Harvest limit of one grizzly bear/license/person/year established.
1969	Mandatory reporting of grizzly bear kills implemented with presentation of hide and head.
1970	Last date of grizzly bear license purchase set at September 15 (the day prior to the first general big game hunting season).
1971	Increase in grizzly bear license fees to \$5 for residents and \$35 for non-residents. The \$25 trophy license remains.  Waiting period of 7 years established for next purchase of a grizzly bear license by successful grizzly bear hunters.
1972	Last date of grizzly bear license purchase set at July 1.  Baiting with livestock, trapping devices, and pursuit with dogs are all prohibited as methods of legal harvest of grizzly bears.
1975	<i>Grizzly bear listed as a threatened species in the lower 48 states under Endangered Species Act of 1972.</i>  <i>Hunting closed in all areas except the NCDE.</i>  <i>In the NCDE, 10 hunting districts established, and an annual quota of 25 human-caused deaths of grizzly bears established, which includes hunting.</i>



Year	Management event or regulation change
1976	<p>Increase in grizzly bear license fees to \$25 for residents and \$125 for non-residents.</p> <p>Regulation enacted that the grizzly bear hunting season closes within 48 hours of notice when the number of bears killed by humans reaches 25.</p>
1978	Last date of license purchase set at June 15.
1980	Increase in grizzly bear license fee to \$150 for non-residents.
1982	<p>Increase in grizzly bear license fee to \$175 for non-residents.</p> <p>Last date of grizzly bear license purchase set at August 31.</p>
1983	Annual sub-quota of 9 human-caused deaths of female grizzly bears established (including hunting) for the NCDE.
1984	Increase in grizzly bear license fees to \$50 for residents and \$300 for non-residents.
1986	<p><i>USFWS issues special rule to adjust quotas allowing grizzly bear hunting along the Rocky Mountain Front. The annual quota of human-caused grizzly bear deaths is adjusted to 21 bears and annual sub-quota adjusted to 6 females in the NCDE.</i></p> <p>Three bear management units established in the NCDE with additional female sub-quotas in each.</p>
1987	State law passed limiting harvest to one grizzly bear/person/lifetime.
1991	<p>A limited entry, spring grizzly bear hunting season implemented on the Rocky Mountain Front.</p> <p><i>Fall grizzly bear hunting season cancelled due to a federal court preliminary injunction on all hunting of grizzly bears.</i></p>
1992	<p>Montana Fish and Wildlife Commission omits grizzly bear hunting season from biennial regulations for 1992–1993.</p> <p><i>Authority for state to establish grizzly bear hunting season in the NCDE removed by USFWS in federal rule.</i></p>

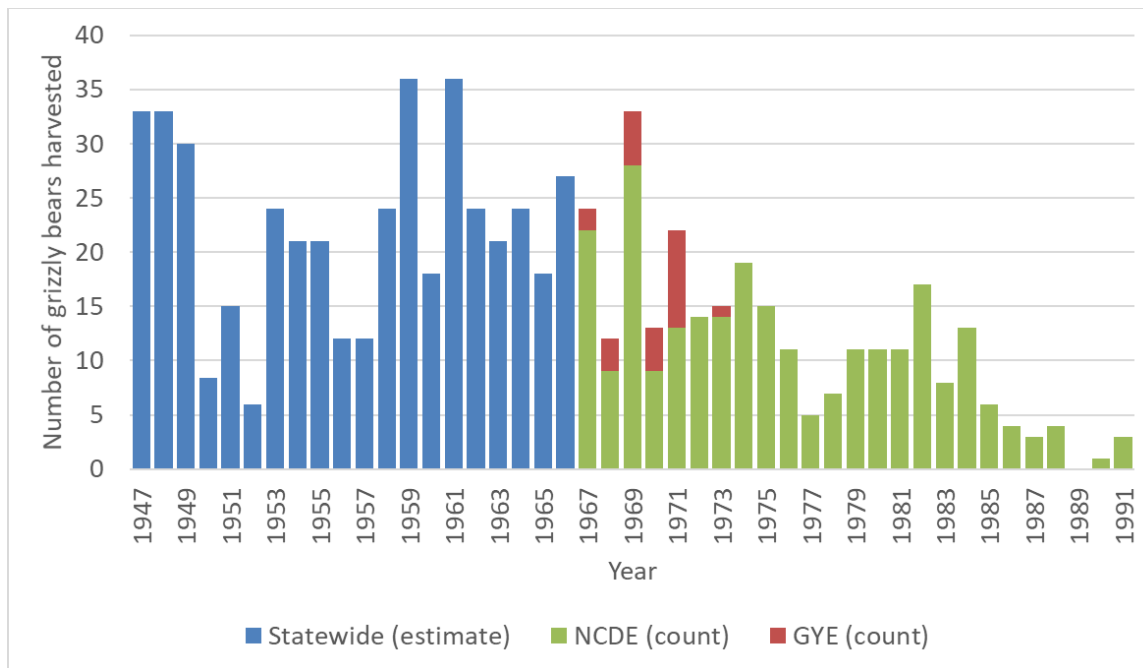


Fig. 1. Estimated (1947-1966) and observed (1967-1991) numbers of grizzly bears harvested in Montana.

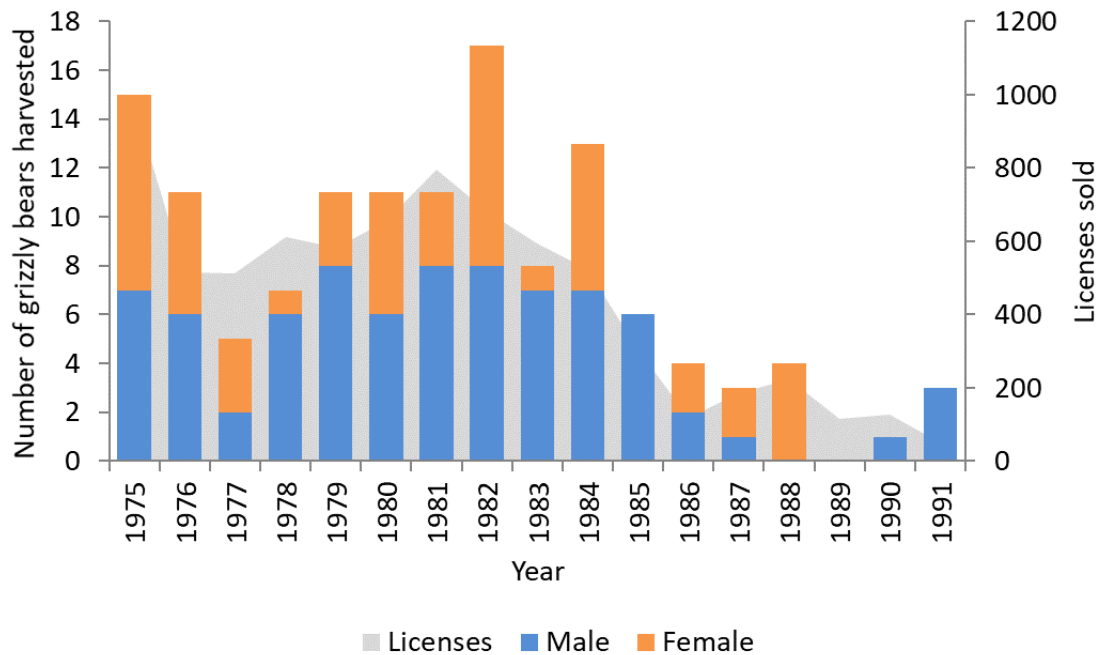


Fig. 2. Observed numbers of grizzly bears harvested and number of grizzly bear licenses sold in the NCDE, 1975–1991.

Greer, K. R. 1972. Grizzly bear mortality and studies in Montana. International Conference on Bear Research and Management 2:53–66.

